



AWS SOLUTION ARCHITECT-PROJECT

PART-A

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1. CREATE CUSTOM VPC WITH ROUTING TABLES, INTERNET GATEWAYS AND SECURITY GROUPS :

VIRGINIA

<input type="checkbox"/>	RTB10	rtb-0969c6c798ac6aae1	subnet-09b65134c02f58524 / PUBLIC_SB10	-	No	vpc-0de29446bfd0fa490 VPC-10	235112814318
<input checked="" type="checkbox"/>	RTB20	rtb-083185c1db1088c48	subnet-016b48c55498aab98 / Private_SB20	-	No	vpc-0de29446bfd0fa490 VPC-10	235112814318
<input type="checkbox"/>	PUBLIC_SB10		subnet-09b65134c02f58524	Available	vpc-0de29446bfd0fa490 VPC-10	10.10.10.0/24	-
<input type="checkbox"/>	Private_SB20		subnet-016b48c55498aab98	Available	vpc-0de29446bfd0fa490 VPC-10	10.10.20.0/24	-

OHIO

<input checked="" type="checkbox"/>	RTB30	rtb-0251d7d6aa78fb96	subnet-0963eff0e0e4df55b / Public_SB30	-	No	vpc-0c9135794784116e7 VPC-172
<input type="checkbox"/>	RTB40	rtb-0c20612add31a58d6	subnet-0ad6a8416d5a1b5bb / Private_SB40	-	No	vpc-0c9135794784116e7 VPC-172
<input type="checkbox"/>	Private_SB40		subnet-0ad6a8416d5a1b5bb	Available	vpc-0c9135794784116e7 VPC...	172.30.40.0/24
<input type="checkbox"/>	Public_SB30		subnet-0963eff0e0e4df55b	Available	vpc-0c9135794784116e7 VPC...	172.30.30.0/24



1.1

INTERNET GATEWAY & SECURITY GROUP :

VIRGINIA(10):

VPC > Internet gateways > igw-0e3f908d50e325173

igw-0e3f908d50e325173 / IGW-10

Details		Info	
Internet gateway ID	igw-0e3f908d50e325173	State	Attached
		VPC ID	vpc-0de29446bfdf0fa4901 VPC-10
		Owner	235112814318
Actions ▾			

sg-0708700fa89e8c666 - SG-10

Details			
Security group name	sg-10	Security group ID	sg-0708700fa89e8c666
Owner	235112814318	Description	PERMIT-SSH-ICMP-HTTP
		VPC ID	vpc-03d4909a5d183d75d
Inbound rules count	3 Permission entries	Outbound rules count	1 Permission entry
Actions ▾			

OHIO(172):

VPC > Internet gateways > igw-062c4301a5a254522

igw-062c4301a5a254522 / IGW-172

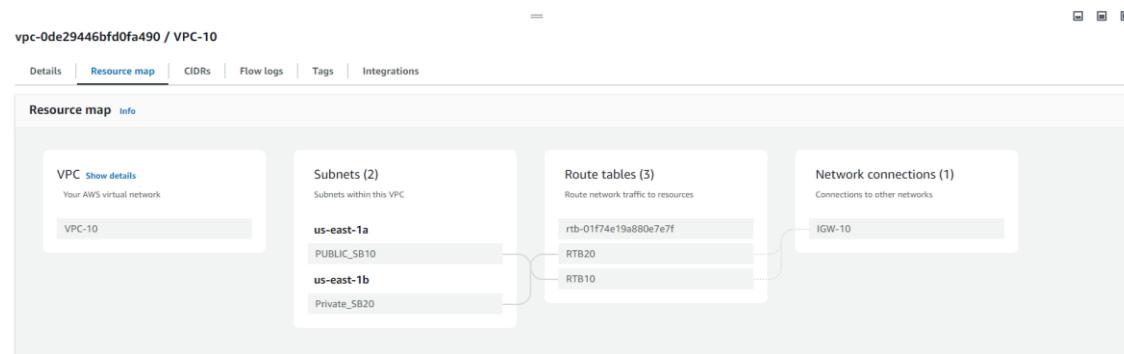
Details		Info	
Internet gateway ID	igw-062c4301a5a254522	State	Attached
		VPC ID	vpc-0c9135794784116e7 VPC-172
		Owner	235112814318
Actions ▾			

sg-056caf6ded916bcfa - SG-172

Details			
Security group name	sg-172	Security group ID	sg-056caf6ded916bcfa
Owner	235112814318	Description	PERMIT-SSH-ICMP-HTTP
		VPC ID	vpc-0c9135794784116e7
Inbound rules count	3 Permission entries	Outbound rules count	1 Permission entry
Actions ▾			



Map VPC in Virginia:



Ping to see connection:

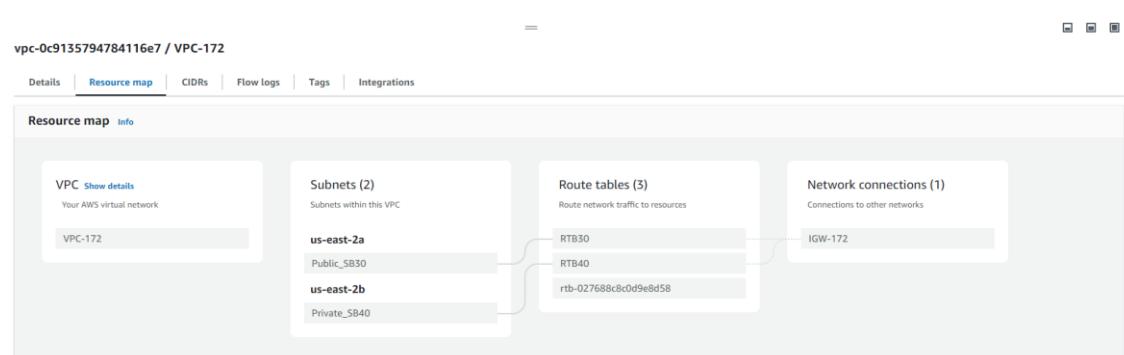
```
Microsoft Windows [Version 10.0.19045.4046]
(c) Microsoft Corporation. 00 000000 000000.

C:\Users\User>ping -t 54.147.7.127

Pinging 54.147.7.127 with 32 bytes of data:
Reply from 54.147.7.127: bytes=32 time=150ms TTL=229
Reply from 54.147.7.127: bytes=32 time=146ms TTL=229
Reply from 54.147.7.127: bytes=32 time=151ms TTL=229
Reply from 54.147.7.127: bytes=32 time=154ms TTL=229
Reply from 54.147.7.127: bytes=32 time=150ms TTL=229
Reply from 54.147.7.127: bytes=32 time=150ms TTL=229
Reply from 54.147.7.127: bytes=32 time=150ms TTL=229
Reply from 54.147.7.127: bytes=32 time=151ms TTL=229

Ping statistics for 54.147.7.127:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 146ms, Maximum = 154ms, Average = 150ms
Control-C
^C
C:\Users\User>
```

Map VPC in Ohio:



```
Microsoft Windows [Version 10.0.19045.4046]
(c) Microsoft Corporation. 00 000000 000000.

C:\Users\User>ping -t 3.14.244.120

Pinging 3.14.244.120 with 32 bytes of data:
Reply from 3.14.244.120: bytes=32 time=170ms TTL=233
Reply from 3.14.244.120: bytes=32 time=167ms TTL=233
Reply from 3.14.244.120: bytes=32 time=171ms TTL=233
Reply from 3.14.244.120: bytes=32 time=167ms TTL=233
Reply from 3.14.244.120: bytes=32 time=167ms TTL=233
Reply from 3.14.244.120: bytes=32 time=166ms TTL=233
Reply from 3.14.244.120: bytes=32 time=169ms TTL=233
Reply from 3.14.244.120: bytes=32 time=169ms TTL=233

Ping statistics for 3.14.244.120:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 166ms, Maximum = 171ms, Average = 168ms
Control-C
^C
C:\Users\User>S
```



2. CREATE GROUPS IN IAM + ADD USERS:

ADMINS - FULL ACCESS TO ALL AWS RESOURCES ➔ LOCALADMIN + MFA

DEV-OPS - FULL ACCESS TO VIRTUAL MACHINES (EC2)
AND STORES (S3); ➔ DEV-1, DEV-2

EC2-OPS - FULL ACCESS ONLY TO EC2; ➔ VM-OPS-3, VM-OPS-4

S3-OPS - FULL ACCESS ONLY TO S3. ➔ STORE-OPS-5, STORE-OPS-6



IAM > Users > localadmin

localadmin [Info](#)

Summary

ARN arn:aws:iam::235112814318:user/localadmin	Console access Enabled with MFA	Access key 1 Create access key
Created March 04, 2024, 13:51 (UTC+02:00)	Last console sign-in Never	

[Permissions](#) | **Groups (1)** | [Tags](#) | [Security credentials](#) | [Access Advisor](#)

User groups membership (1)
A user group is a collection of IAM users. Use groups to specify permissions for a collection of users. A user can be a member of up to 10 groups at a time.

<input type="checkbox"/> Group name	Attached policies [?]
<input type="checkbox"/> Admins-Full	AdministratorAccess

→ **Admins - Full Access to All AWS Resources**
Localadmin + MFA

**Dev-Ops - Full Access to Virtual Machines (EC2)
and Stores (S3); Dev-1, Dev-2**

IAM > User groups > Dev_Ops

Dev_Ops [Info](#)

Summary

User group name Dev_Ops	Creation time March 04, 2024, 13:48 (UTC+02:00)	ARN arn:aws:iam::235112814318:group/Dev_Ops
----------------------------	--	--

[Users \(2\)](#) | [Permissions](#) | [Access Advisor](#)

Users in this group (2)
An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

<input type="checkbox"/> User name [?]	Groups	Last activity	Creation time
<input type="checkbox"/> DEV1	1	None	Now
<input type="checkbox"/> DEV2	1	None	Now



EC2-Ops - Full Access only to EC2
+ VM-Ops-3, VM-Ops-4

IAM > User groups > EC2_Ops

EC2_Ops Info

Summary

User group name	EC2_Ops	Creation time	March 04, 2024, 13:48 (UTC+02:00)
ARN	arn:aws:iam::235112814318:group/EC2_Ops		

Users (2) **Permissions** **Access Advisor**

Users in this group (2)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

User name	Groups	Last activity	Creation time
VM-OPS3	1	None	1 minute ago
VM-OPS4	1	None	1 minute ago

IAM > User groups > S3-Ops

S3-Ops Info

Summary

User group name	S3-Ops	Creation time	March 04, 2024, 13:49 (UTC+02:00)
ARN	arn:aws:iam::235112814318:group/S3-Ops		

Users (2) **Permissions** **Access Advisor**

Users in this group (2)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

User name	Groups	Last activity	Creation time
STOR-OP5	1	None	1 minute ago
STOR-OP6	1	None	Now

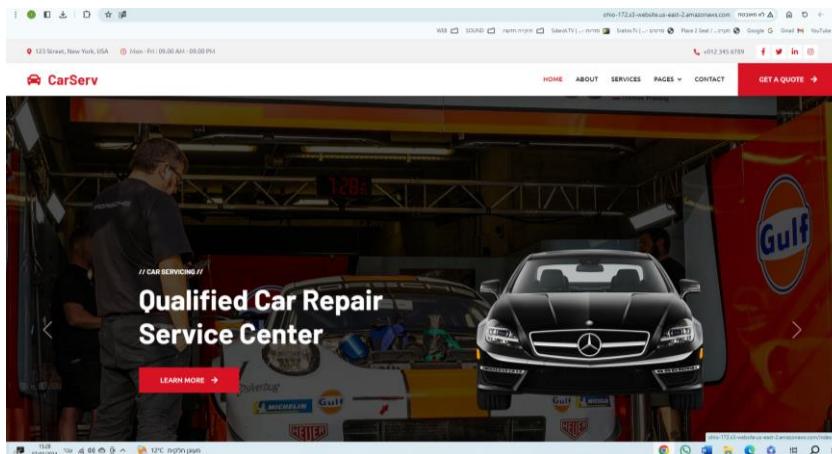


S3-Ops - Full Access only to S3.
+ Store-Ops-5, Store-Ops-6

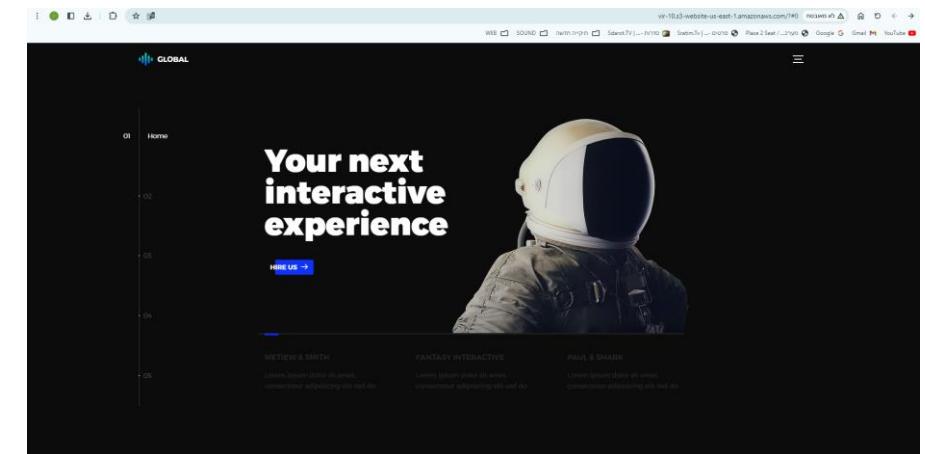


3.Create in VPC-10-Virginia and VPC-172-Ohio Offices Static (Public) WEB-Sites on S3:

OHIO(172):



VIRGINIA(10):



Amazon S3 > Buckets > ohio-172

ohio-172 Info

Objects Properties Permissions Metrics Management Access Points

Bucket overview

AWS Region	Amazon Resource Name (ARN)	Creation date
US East (Ohio) us-east-2	arn:aws:s3:::ohio-172	March 4, 2024, 14:34:52 (UTC+02:00)

Amazon S3 > Buckets > vir-10

vir-10 Info

Objects Properties Permissions Metrics Management Access Points

Bucket overview

AWS Region	Amazon Resource Name (ARN)	Creation date
US East (N. Virginia) us-east-1	arn:aws:s3:::vir-10	March 4, 2024, 14:10:11 (UTC-02:00)



4.Create EC2's For Private DB's And Jump's (Bastion) Host's :

OHIO(172):

Instances (2) Info						
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
DB40	i-05a6fdf100077475f	Running	t2.micro	Initializing	View alarms	us-east-2b
JH30	i-09b52b04d300321b6	Running	t2.micro	-	View alarms	us-east-2a

```

aws Services Search [Alt+S]
Amazon Linux 2
AL2 End of Life is 2025-06-30.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-30-30-27 ~]$ mkdir PKI
[ec2-user@ip-172-30-30-27 ~]$ cd PKI
[ec2-user@ip-172-30-30-27 PKI]$ nano ohio_project.pem
[ec2-user@ip-172-30-30-27 PKI]$ chmod 400 ohio_project.pem
[ec2-user@ip-172-30-30-27 PKI]$ ssh -i ohio_project.pem ec2-user@172.30.40.99
The authenticity of host '172.30.40.99 (172.30.40.99)' can't be established.
ECDSA key fingerprint is SHA256:toRfqZsggjbpxfamvJcYLJmqJrMdfXNLWZIEaeV8exo.
ECDSA key fingerprint is MD5:13:59:f3:f7:99:d6:e2:91:80:dd:95:47:6e:cd:50:62.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.30.40.99' (ECDSA) to the list of known hosts.

Amazon Linux 2
AL2 End of Life is 2025-06-30.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-30-40-99 ~]$ 

```

VIRGINIA(10):

Instances (2) Info						
Name	Instance ID	Instance state	Instance type	Status check	Availability Zone	Public IPv4 DNS
DB20	i-0fa55436c4931ecc4	Running	t2.micro	Initializing	us-east-1b	-
JH10	i-0fee082eb1383f7d	Running	t2.micro	Initializing	us-east-1a	-

```

Amazon Linux 2
AL2 End of Life is 2025-06-30.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

10 package(s) needed for security, out of 10 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-10-10-27 ~]$ cd PKI
[ec2-user@ip-10-10-10-27 ~]$ cd PKI
[ec2-user@ip-10-10-10-27 PKI]$ nano virProject.pem
[ec2-user@ip-10-10-10-27 PKI]$ chmod 400 virProject.pem
[ec2-user@ip-10-10-10-27 PKI]$ ssh -i virProject.pem ec2-user@10.10.20.138
The authenticity of host '10.10.20.138 (10.10.20.138)' can't be established.
ECDSA key fingerprint is SHA256:G18wRfc/VO6CG18ZSCBF622RpSVeEvecOK7zyGxBsw.
ECDSA key fingerprint is MD5:61:2a:f7:9a:fb:1a:f5:hb:e9:96:e7:4b:57:bc:11.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.10.20.138' (ECDSA) to the list of known hosts.

Amazon Linux 2
AL2 End of Life is 2025-06-30.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-10-10-20-138 ~]$ 

```



Peering connections (1/1) Info		Actions ▾	Create peering connection					
<input type="text"/> Find resources by attribute or tag		 						
Name	Peering connection ID	Status	Requester VPC	Acceptor VPC	Requester CIDRs	Acceptor CIDRs	Requester owner ID	Accept
vir10-2-ohio172	pcx-0787d2d10466b7a8a	Active	vpc-0de29446bfd0fa490 / VPC-10	vpc-0c9135794784116e7	10.10.0.0/16	172.30.0.0/16	235112814318	23511

5. Create Peering Connection from Virginia to Ohio and check connectivity with Private IP from DB20 to DB40:

```
~~ \###| AL2 End of Life is 2025-06-30.  
~~ `##/  
~~ V.:->  
~~ / A newer version of Amazon Linux is available!  
~~ /  
~~ / Amazon Linux 2023, GA and supported until 2028-03-15.  
_m/ https://aws.amazon.com/linux/amazon-linux-2023/  
  
10 package(s) needed for security, out of 10 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-10-10-10-27 ~]$ mkdir PKI  
[ec2-user@ip-10-10-10-27 ~]$ cd PKI  
[ec2-user@ip-10-10-10-27 PKI]$ nano virProject.pem  
[ec2-user@ip-10-10-10-27 PKI]$ chmod 400 virProject.pem  
[ec2-user@ip-10-10-10-27 PKI]$ ssh -i virProject.pem ec2-user@10.10.20.138  
The authenticity of host '10.10.20.138 (10.10.20.138)' can't be established.  
ECDSA key fingerprint is SHA256:Gl8wRfcV06Gcg1zSCBFB622RpFSVeEwcoK7zyGx8w.  
ECDSA key fingerprint is MD5:61:2a:7f:9a:fba:f5:bb:e9:96:e7:4b:57:bc:11  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added '10.10.20.138' (ECDSA) to the list of known hosts.  
~~ #  
~~ \###| Amazon Linux 2  
~~ `##/  
~~ V.:->  
~~ / AL2 End of Life is 2025-06-30.  
~~ /  
~~ / A newer version of Amazon Linux is available!  
~~ /  
~~ / Amazon Linux 2023, GA and supported until 2028-03-15.  
_m/ https://aws.amazon.com/linux/amazon-linux-2023/  
  
[ec2-user@ip-10-10-20-138 ~]$ ping 172.30.40.153  
PING 172.30.40.153 (172.30.40.153) 56(84) bytes of data.  
64 bytes from 172.30.40.153: icmp_seq=1 ttl=255 time=11.7 ms  
64 bytes from 172.30.40.153: icmp_seq=2 ttl=255 time=11.0 ms  
64 bytes from 172.30.40.153: icmp_seq=3 ttl=255 time=11.1 ms  
64 bytes from 172.30.40.153: icmp_seq=4 ttl=255 time=11.1 ms  
S64 bytes from 172.30.40.153: icmp_seq=5 ttl=255 time=11.1 ms  
64 bytes from 172.30.40.153: icmp_seq=6 ttl=255 time=11.1 ms  
64 bytes from 172.30.40.153: icmp_seq=7 ttl=255 time=11.0 ms  
64 bytes from 172.30.40.153: icmp_seq=8 ttl=255 time=11.0 ms
```



6. CREATE CUSTOM VPC WITH ROUTING TABLES, INTERNET GATEWAYS AND SECURITY GROUPS IN REGION FRANKFURT :

Instances (3) [Info](#)

Find Instance by attribute or tag (case-sensitive)

Any state ▾

Name	Instance ID	Instance state	Instanc...	Status check	Alarm status	Availabi...	Public I...	Public I...	Elastic IP	IPv6 IPs	Monitor...	Security group name	Key name
AZ-A-SB50	i-0fd6a3ed...	Running	t2.micro	2/2 checks passed	View alarms +	eu-central-1a	-	3.77.56.154	-	-	disabled	FARNKFURT-SG-HTTP-S...	FARNKFURT-P...
AZ-B-SB60	i-0beff045...	Running	t2.micro	2/2 checks passed	View alarms +	eu-central-1b	-	18.196.198...	-	-	disabled	FARNKFURT-SG-HTTP-S...	FARNKFURT-P...
AZ-C-SB70	i-0b7f780a...	Running	t2.micro	2/2 checks passed	View alarms +	eu-central-1c	-	3.79.206.246	-	-	disabled	FARNKFURT-SG-HTTP-S...	FARNKFURT-P...

vpc-0e6ed1a16284dfc45 / FRANKFURT-VPC

Details | [Resource map](#) | CIDs | Flow logs | Tags | Integrations

Resource map [Info](#)

VPC [Show details](#)
Your AWS virtual network
FRANKFURT-VPN

Subnets (3)
Subnets within this VPC

- eu-central-1a
Public SB50
- eu-central-1b
Public SB60
- eu-central-1c
Public SB70

Route tables (4)
Route network traffic to resources

- rtb-062429d6f6b5e4351
- RTB70
- RTB50
- RTB60

Network connections (1)
Connections to other networks

- FRANK-IGW



7. ALB (APPLICATION LOAD BALANCE):

[EC2](#) > [Load balancers](#)

Load balancers (1/1)
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
<input checked="" type="checkbox"/> FARNKFURT-ALB	FARNKFURT-ALB-1259429... 	Active	vpc-0e6ed1a16284dfc45	3 Availability Zones	application	March 10, 2024, 15:32 (UTC+02:00)

Load balancer: FARNKFURT-ALB

- Details
- Listeners and rules
- Network mapping
- Resource map - new**
- Security
- Monitoring
- Integrations
- Attributes
- Tags

Resource map Info
View, explore, and troubleshoot your load balancer's architecture.

Overview **Unhealthy target map**

FARNKFURT-ALB

```

graph LR
    Listener[Listeners (1)] --> Rule[Rules (1)]
    Rule -- "HTTP:80, 1 rule" --> TargetGroup[Target groups (1) Info]
    TargetGroup -- "Instance TG-AZ-abc-sb50-60-70, 3 targets" --> Targets[Targets (3)]
    Targets --> Target1[i-0b7f780ae6c7b519b, Port 80]
    Targets --> Target2[i-0beff04584f31d7ec, Port 80]
    Targets --> Target3[i-0fd6a3ed52c88a56b, Port 80]
  
```

[farnkfurt-alb-1259429893.eu-central-1.elb.amazonaws.com](#) | לא מוכנה

ALB-1bz

[farnkfurt-alb-1259429893.eu-central-1.elb.amazonaws.com](#) | לא מוכנה

ALB-1az

[farnkfurt-alb-1259429893.eu-central-1.elb.amazonaws.com](#) | לא מוכנה

ALB-1cz

[farnkfurt-alb-1259429893.eu-central-1.elb.amazonaws.com](#) | לא מוכנה



8. CREATE NLB1 (NETWORK LOAD BALANCE) :

The screenshot shows the AWS Elastic Load Balancing (ELB) service interface. At the top, there's a navigation bar with 'EC2 > Load balancers'. Below it, a table lists 'Load balancers (1/1)'. A single entry is shown: 'FRANKFURT-NLB' (Active, vpc-0e6ed1a16284dfc45, 3 Availability Zones, network type, created March 10, 2024, 15:48 UTC+02:00). An orange 'Create load balancer' button is visible. Below the table, a detailed view for 'Load balancer: FRANKFURT-NLB' is open. It has tabs for 'Details', 'Listeners', 'Network mapping', 'Security', 'Monitoring', 'Integrations', 'Attributes', and 'Tags'. The 'Details' tab is selected, displaying information such as Load balancer type (Network), Status (Active), VPC (vpc-0e6ed1a16284dfc45), IP address type (IPv4), Hosted zone (Z3F05RJ5LGBH90), Availability Zones (three listed), Date created (March 10, 2024, 15:48 UTC+02:00), Load balancer ARN (arn:aws:elasticloadbalancing:eu-central-1:235112814318:loadbalancer/net/FRANKFURT-NLB/e2318ef5be5c96e8), and DNS name info (FRANKFURT-NLB-e2318ef5be5c96e8.elb.eu-central-1.amazonaws.com (A Record)).



CHECK CONNECTIVITY:

EC2 > Target groups

Target groups (1/1) Info

Filter target groups

Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
TG-NLB-AZ-ABC-SB-50-60-70	arn:aws:elasticloadbalancing:eu-central-1:123456789012:targetgroup/TG-NLB-AZ-ABC-SB-50-60-70	80	TCP	Instance	FRANKFURT-NLB	vpc-0e6ed1a16284dfc45

Target group: TG-NLB-AZ-ABC-SB-50-60-70

Details Targets Monitoring Health checks Attributes Tags

Registered targets (3)

Instance ID	Name	Port	Zone	Health status	Health status details	Launch time
i-04830569fd5302922	AZ-C-SB-70	80	eu-central-1a	Initial	Initial health checks in progress	March 10, 2024, 16:08 (UTC+0)
i-0536bca67ce5f5ce0	AZ-B-SB60	80	eu-central-1b	Initial	Initial health checks in progress	March 10, 2024, 16:07 (UTC+0)
i-058d68174f93cf1d5	AZ-B-SB50	80	eu-central-1a	Initial	Initial health checks in progress	March 10, 2024, 16:06 (UTC+0)

frankfurt-nlb-e2318ef5be5c96e8.elb.eu-central-1.amazonaws.com | לא תמכחן | בחר מינימום

NLB-1az

frankfurt-nlb-e2318ef5be5c96e8.elb.eu-central-1.amazonaws.com | לא תמכחן | בחר מינימום

NLB-1az

frankfurt-nlb-e2318ef5be5c96e8.elb.eu-central-1.amazonaws.com | לא תמכחן | בחר מינימום

NLB-1az



9. AUTO SCALING GROUP (ASG):

ASG DETAILS:

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) Info

Search your Auto Scaling groups

Name Launch template/configuration Instances Status Desired capacity Min Max Availability Zones

ASG-Virginia TMP-Virginia | Version Latest 1 - 1 1 2 us-east-1a, us-east-1b

Actions Create Auto Scaling group

< 1 > @

Auto Scaling group: ASG-Virginia

Group details

Auto Scaling group name ASG-Virginia	Desired capacity 1	Desired capacity type Units (number of instances)	Amazon Resource Name (ARN) arn:aws:autoscaling:us-east-1:235112814318:autoScalingGroup:7978e01c-f17b-4629-a960-80ba521e2538:autoScalingGroupName/ASG-Virginia
Date created Mon Mar 11 2024 15:17:10 GMT+0200 ((שעון ישראל (וורן)))	Minimum capacity 1	Status -	
	Maximum capacity 2		

Edit

Launch template

Launch template lt-0bc1fc8859adeef5 TMP-Virginia	AMI ID ami-07761f3ae34c4478d	Instance type t2.micro	Owner arn:aws:iam::235112814318:root
Version Latest	Security groups -	Security group IDs sg-000d757248d278881	Create time Mon Mar 11 2024 15:24:18 GMT+0200 ((שעון ישראל (וורן)))

Edit

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ASG TEMPLATE & POLICIES:

[EC2](#) > Auto Scaling groups

Auto Scaling groups (1/1) [Info](#)

Search your Auto Scaling groups

[Create Auto Scaling group](#)

<input checked="" type="checkbox"/> Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
ASG-Virginia	TMP-Virginia Version Latest	1	-	1	1	2	us-east-1a, us-east-1b

Auto Scaling group: ASG-Virginia

Launch template

Launch template lt-0bc1fc8859adeefaa5 TMP-Virginia	AMI ID ami-07761f3ae34c4478d	Instance type t2.micro	Owner arn:aws:iam::235112814318:root
Version Latest	Security groups -	Security group IDs sg-000d757248d278881	Create time Mon Mar 11 2024 15:24:18 GMT+0200 ((עראן)) (שעון ישראל)
Description v2	Storage (volumes) -	Key pair name -	Request Spot Instances No

[View details in the launch template console](#)

Network

Availability Zones us-east-1a, us-east-1b	Subnet ID subnet-09b65134c02f58524, subnet-016b48c55498aab98
--	---

Auto Scaling group: ASG-Virginia

Dynamic scaling policies (1) [Info](#)

Target Tracking Policy

Target tracking scaling

Enabled

As required to maintain Average CPU utilization at 40

Add or remove capacity units as required

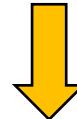
60 seconds to warm up before including in metric

Enabled



ASG ACTIVITY:

CPU STRESS

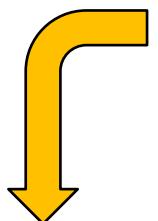


Status	Description	Cause	Start time	End time
Successful	Launching a new EC2 instance: i-0c3d81de1888b07b6	At 2024-03-11T13:35:34Z a monitor alarm TargetTracking-ASG-Virginia-AlarmHigh-b2c045e6-4124-485d-ae7f-19c89a62573c in state ALARM triggered policy Target Tracking Policy changing the desired capacity from 1 to 2. At 2024-03-11T13:35:45Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2024 March 11, 03:35:46 PM +02:00	2024 March 11, 03:37:18 PM +02:00 <pre>[ec2-user@ip-10-10-10-92 ~]\$ stress -c 16 stress: info: [6979] dispatching hogs: 16 cpu, 0 io, 0 vm, 0 hdd</pre>
Successful	Launching a new EC2 instance: i-0bd81ede16e1cceao	At 2024-03-11T13:29:23Z an instance was launched in response to an unhealthy instance needing to be replaced.	2024 March 11, 03:29:25 PM +02:00	2024 March 11, 03:29:56 PM +02:00
Successful	Terminating EC2 instance: i-0f997a406a76fe9a7	At 2024-03-11T13:29:22Z an instance was taken out of service in response to an EC2 health check indicating it has been terminated or stopped.	2024 March 11, 03:29:23 PM +02:00	2024 March 11, 03:29:24 PM +02:00
Successful	Launching a new EC2 instance: i-0f997a406a76fe9a7	At 2024-03-11T13:25:24Z an instance was launched in response to an unhealthy instance needing to be replaced.	2024 March 11, 03:25:26 PM +02:00	2024 March 11, 03:25:58 PM +02:00
Successful	Terminating EC2 instance: i-027d5542a951e9672	At 2024-03-11T13:25:24Z an instance was taken out of service in response to an EC2 health check indicating it has been terminated or stopped.	2024 March 11, 03:25:24 PM +02:00	2024 March 11, 03:25:46 PM +02:00
Successful	Launching a new EC2 instance: i-027d5542a951e9672	At 2024-03-11T13:20:54Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2024 March 11, 03:20:56 PM +02:00	2024 March 11, 03:21:27 PM +02:00
Successful	Terminating EC2 instance: i-095bb8365d8bf3332	At 2024-03-11T13:19:19Z an instance was taken out of service in response to an EC2 health check indicating it has been terminated or stopped.	2024 March 11, 03:19:19 PM +02:00	2024 March 11, 03:19:20 PM +02:00
Successful	Launching a new EC2 instance: i-095bb8365d8bf3332	At 2024-03-11T13:17:10Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2024-03-11T13:17:14Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2024 March 11, 03:17:16 PM +02:00	2024 March 11, 03:17:47 PM +02:00



DOCKER :

INSTALLING DOCKER:



aws | Services Q S A ? 🔍 N. Virginia ▾

```
[ec2-user@ip-10-10-10-228 ~]$ sudo yum -y install docker
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package docker.x86_64 0:20.10.25-1.amzn2.0.4 will be installed
---> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.25-1.amzn2.0.4.x86_64
---> Processing Dependency: libcgroup >= 0.40.rcl-5.15 for package: docker-20.10.25-1.amzn2.0.4.x86_64
---> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.25-1.amzn2.0.4.x86_64
---> Processing Dependency: pigz for package: docker-20.10.25-1.amzn2.0.4.x86_64
---> Running transaction check
---> Package containerd.x86_64 0:1.7.11-1.amzn2.0.1 will be installed
---> Package libcgroup.x86_64 0:0.41-21.amzn2 will be installed
---> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
---> Package runc.x86_64 0:1.1.11-1.amzn2 will be installed
---> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version            Repository      Size
=====
Installing:
  docker          x86_64    20.10.25-1.amzn2.0.4   amzn2extra-docker  43 M
Installing for dependencies:
```

```
[ec2-user@ip-10-10-10-228 ~]$ sudo systemctl start docker
[ec2-user@ip-10-10-10-228 ~]$ sudo systemctl enable docker
Created symlink from /etc/systemd/system/multi-user.target.wants/docker.service to /usr/lib/systemd/system/docker.service.
[ec2-user@ip-10-10-10-228 ~]$ sudo usermod -a -G docker ec2-user
[ec2-user@ip-10-10-10-228 ~]$ newgrp docker
[ec2-user@ip-10-10-10-228 ~]$ export PATH=$PATH:/usr/local/bin
[ec2-user@ip-10-10-10-228 ~]$ docker images
REPOSITORY      TAG      IMAGE ID      CREATED      SIZE
[ec2-user@ip-10-10-10-228 ~]$
```



CREATING DOCKERFILE AND INDEX.HTML :

```
[ec2-user@ip-10-10-10-228 Site-A]$ nano index.html
[ec2-user@ip-10-10-10-228 Site-A]$ cat index.html
<!DOCTYPE html>
<html>
  <head>
    <title> Docker nginx page</title>
  </head>

  <body bgcolor=aqua>
    <b>
      <h1> Hello! The container has been successfully deployed.
      </h1>

      <h2> The current date and time:
      <p><span id="datetime"></span></p>
      <script>
        var dt = new Date();
        document.getElementById("datetime").innerHTML = dt.toLocaleString();
      </script>
    <h2/>
    <b/>

    </body>
<html/>
[ec2-user@ip-10-10-10-228 Site-A]$
```

```
[ec2-user@ip-10-10-10-228 Site-A]$ echo "FROM nginx
> COPY index.html /usr/share/nginx/html
> EXPOSE 80" > /home/ec2-user/Site-A/Dockerfile
[ec2-user@ip-10-10-10-228 Site-A]$ cat Dockerfile
FROM nginx
COPY index.html /usr/share/nginx/html
EXPOSE 80
[ec2-user@ip-10-10-10-228 Site-A]$
```



CREATE CUSTOM IMAGE:

```
[ec2-user@ip-10-10-10-228 Site-A]$ docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
8a1e25ce7c4f: Pull complete
e78b137be355: Pull complete
39fc875bd2b2: Pull complete
035788421403: Pull complete
87c3fb37cbf2: Pull complete
c5cdd1ce752d: Pull complete
33952c599532: Pull complete
Digest: sha256:6db391d1c0cfb30588ba0bf72ea999404f2764febfb0f1f196acd5867ac7efa7e
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
[ec2-user@ip-10-10-10-228 Site-A]$ docker build -t mynginx .
Sending build context to Docker daemon 3.584kB
Step 1/3 : FROM nginx
--> 92b11f67642b
Step 2/3 : COPY index.html /usr/share/nginx/html
--> 226494e2b881
Step 3/3 : EXPOSE 80
--> Running in 0c418244acbe
Removing intermediate container 0c418244acbe
--> 602143aaccee
Successfully built 602143aaccee
Successfully tagged mynginx:latest
[ec2-user@ip-10-10-10-228 Site-A]$ docker run -d -p 50880:80 --name=MyNGINX mynginx
8b8504fbc764a69cfaa89fa48d504ba0e437dfa47dbd5ec4480483ed7aa87603
[ec2-user@ip-10-10-10-228 Site-A]$ docker run -d -p 51880:80 --name=MyNGINX2 mynginx
a4480ecdfb391991b18223e8b3725cf190ae149af403479af7ed1c10765597ac
[ec2-user@ip-10-10-10-228 Site-A]$ docker run -d -p 52880:80 --name=MyNGINX3 mynginx
a1f1d19d731874ae2c94558c8bfca7288a71e10abc9ac00dfffd953350e4673bd
[ec2-user@ip-10-10-10-228 Site-A]$
```

Hello! The container has been successfully deployed.

The current date and time:
28.3.2024, 11:08:44

Hello! The container has been successfully deployed.

The current date and time:
28.3.2024, 11:08:58

Hello! The container has been successfully deployed.

The current date and time:
28.3.2024, 11:09:05



PART -B



CREATING EC2 FRONT-END IN PUBLIC SUBNET:

Instances (1/1) [Info](#)

Find Instance by attribute or tag (case-sensitive)

Any state ▾

Instance state = running [Clear filters](#)

Name	Instance ID	Instance state	Instance type	Status check	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Security group name	Key name	Launch ti
front	i-08429739388faffe2	Running	t2.micro	2/2 checks passed	us-east-1a	-	18.208.141.206	Sg-10,ec2-rds-5	-	2024/03/

Instance: i-08429739388faffe2 (front)

Instance ID i-08429739388faffe2 (front)	Public IPv4 address 18.208.141.206 [open address]	Private IPv4 addresses 10.10.10.14
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-10-10-10-14.ec2.internal	Private IP DNS name (IPv4 only) ip-10-10-10-14.ec2.internal	Elastic IP addresses -
Answer private resource DNS name -	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 18.208.141.206 [Public IP]	VPC ID vpc-0de29446bfd0fa490 (VPC-10)	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-09b65134c02f58524 (PUBLIC_SB10)	Monitoring disabled
IMDSv2 Required	AMI ID ami-02d7fd1c2af6eead0	
▼ Instance details Info		



CREATING RDS BACK-END FOR WORDPRESS IN PRIVATE SUBNET:

The screenshot shows the AWS RDS console interface for managing databases. The main view displays the summary of a database instance named **dbec2**. The instance is currently **Available** and is running the **MySQL Community** engine. It is associated with the **us-east-1a** region and AZ. The instance class is **db.t2.micro**, and it has 4.68% CPU usage with 0 connections. The **Actions** button is visible in the top right corner.

Summary

DB identifier	Status	Role	Engine	Recommendations
dbec2	Available	Instance	MySQL Community	
CPU	Class	Current activity	Region & AZ	
4.68%	db.t2.micro	0 Connections	us-east-1a	

Connectivity & security

Endpoint & port	Networking	Security
Endpoint dbec2.cticaogsmi2s.us-east-1.rds.amazonaws.com	Availability Zone us-east-1a	VPC security groups default (sg-01597e607f899fd97) Active rds-ec2-5 (sg-042ed3a824d2743b1) Active
Port 3306	VPC VPC-10 (vpc-0de29446bfd0fa490)	Publicly accessible No
	Subnet group rds-ec2-db-subnet-group-3	Certificate authority Info rds-ca-rsa2048-g1
	Subnets subnet-08359091a7ffcba51 subnet-0e1652e401bb4fe30 subnet-1056021151001156	Certificate authority data

CloudShell **Feedback** © 2024, Amazon Web Services, Inc. or its affiliates. **Privacy** **Terms** **Cookie preferences**



WORDPRESS LOG-IN :

A screenshot of a web browser window displaying a WordPress login screen. The URL in the address bar is 18.208.141.206/wp-login.php. The browser's toolbar includes icons for back, forward, search, and refresh. Below the toolbar, there are links for ChatGPT, Telegram Web, WhatsApp, and other social media platforms. The main content area shows the classic blue 'W' WordPress logo at the top. Below it is a login form with two input fields: "Username or Email Address" containing "localadmin3" and "Password" containing "Aa123456". There is also a "Remember Me" checkbox and a "Log In" button. At the bottom of the form, there are links for "Lost your password?" and "← Go to wp-project".

Username or Email Address
localadmin3

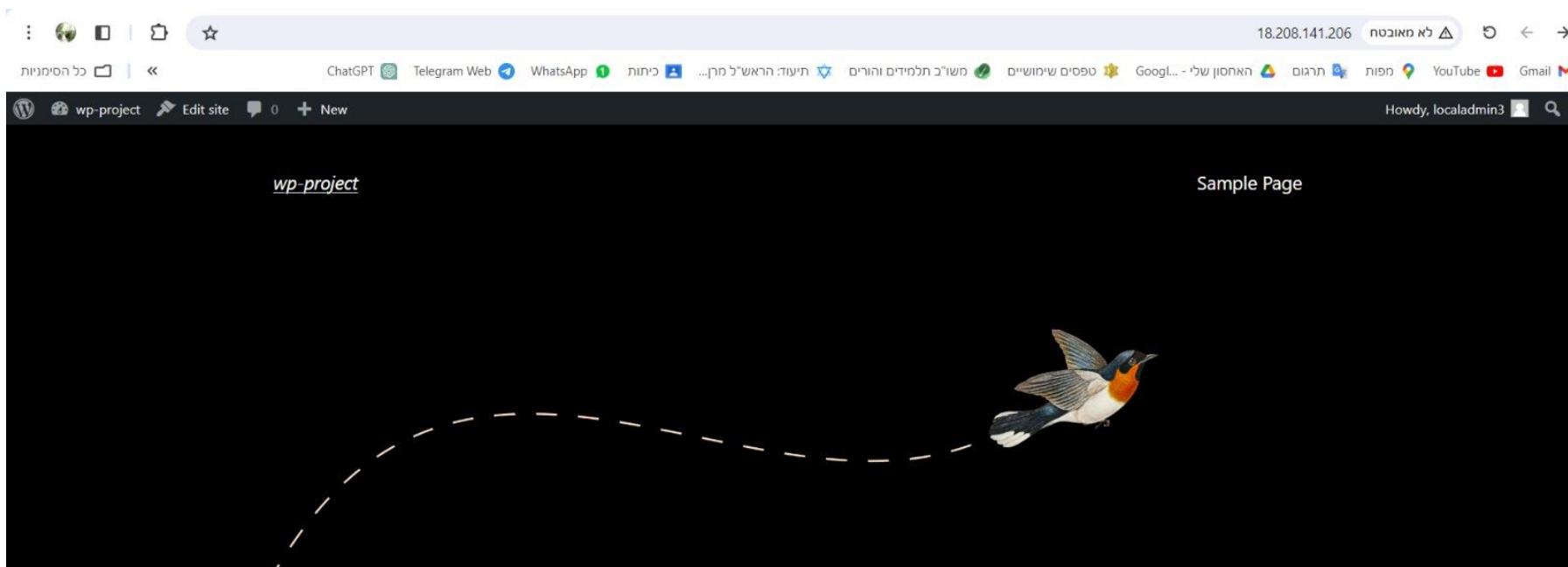
Password
Aa123456

Remember Me

[Lost your password?](#)
[← Go to wp-project](#)



CREATING WORDPRESS WEB-SITE :



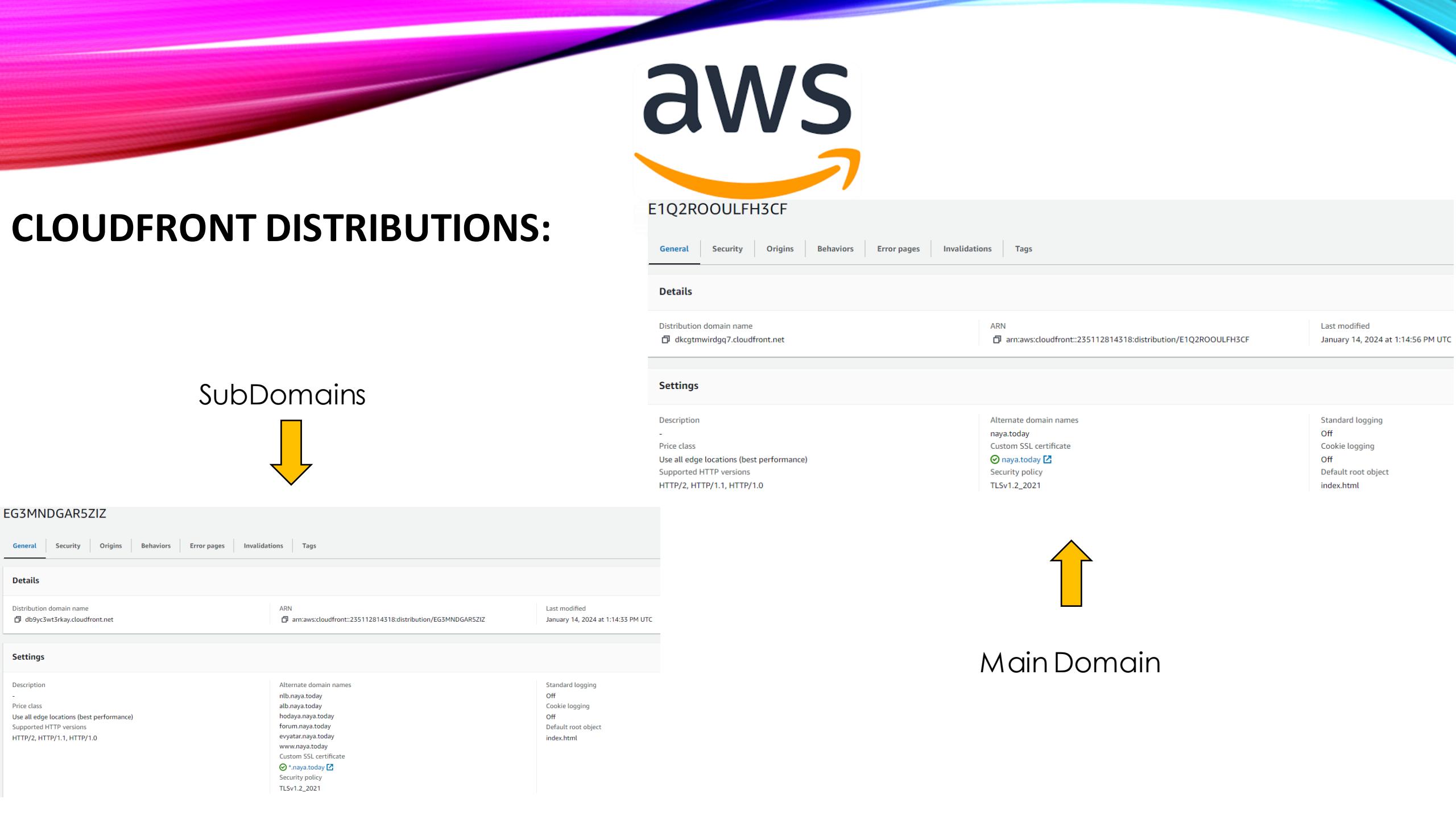
Hello world!

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

CREATING GODADDY DOMAIN & SSL CERTIFICATES :

The image shows the AWS DNS Management interface. At the top, the AWS logo is displayed above the text "DNS Management". Below this, a search bar contains the domain "naya.today". To the right of the search bar are "Domain Settings" and "Select a different domain" buttons. A navigation bar below the search bar includes tabs for "DNS Records", "Forwarding", Nameservers, "Premium DNS", "Hostnames", and "DS Records". The "Nameservers" tab is currently selected. A sub-section titled "Nameservers" explains their purpose: "Nameservers determine where your DNS is hosted and where you add, edit or delete your DNS records." It shows four listed nameservers: "ns-1914.awsdns-47.co.uk", "ns-776.awsdns-33.net", "ns-305.awsdns-38.com", and "ns-1386.awsdns-45.org". At the bottom, a "Certificates" section displays two issued certificates for the domain "naya.today". The first certificate is for the subdomain ".naya.today" and the second is for the main domain "naya.today". Both certificates were issued by Amazon and are marked as "Issued" with a green checkmark. The "Key algorithm" for both is RSA 2048.

Certificate ID	Domain name	Type	Status	In use	Renewal eligibility	Key algorithm
4c4d1ba4-a702-48f6-b13f-c0048ee29efe	.naya.today	Amazon Issued	Issued	Yes	Eligible	RSA 2048
27787895-daa5-4eee-b0e1-72e3b53452c6	naya.today	Amazon Issued	Issued	Yes	Eligible	RSA 2048





CREATING ROUT 53 WITH CNAME & A RECORDS:

Route 53 > Hosted zones > naya.today

Public naya.today Info

Delete zone Test record Configure query logging

Hosted zone details Edit hosted zone

Records (5) DNSSEC signing Hosted zone tags (0)

Records (1/5) Info

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

Filter records by property or value Type Routing pol... Alias

Record name	Type	Routine...	Differ...	Alias	Value/Route traffic to	TTL (s...)	Health ...	Evaluat...
naya.today	A	Simple	-	Yes	dkcgtnwirdgq7.cloudfront.net.	-	-	No
naya.today	NS	Simple	-	No	ns-1914.awsdns-47.co.uk. ns-776.awsdns-33.net. ns-305.awsdns-38.com. ns-1386.awsdns-45.org.	172800	-	-
naya.today	SOA	Simple	-	No	ns-1914.awsdns-47.co.uk. a...	900	-	-
<input checked="" type="checkbox"/> _b34e9576ae1acf0b72f976c6ed107621.na...	CNAME	Simple	-	No	_1bba36b56f7b77e22b47c2d85d1f0e66.mhbtsbpdn.acm-validations.aws.	300	-	-
www.naya.today	A	Simple	-	Yes	db9yc3wt3rkay.cloudfront.net.	-	-	No

Record details

Edit record

Record name
 _b34e9576ae1acf0b72f976c6ed107621.naya.today

Record type
CNAME

Value
 _1bba36b56f7b77e22b47c2d85d1f0e66.mhbtsbpdn.acm-validations.aws.

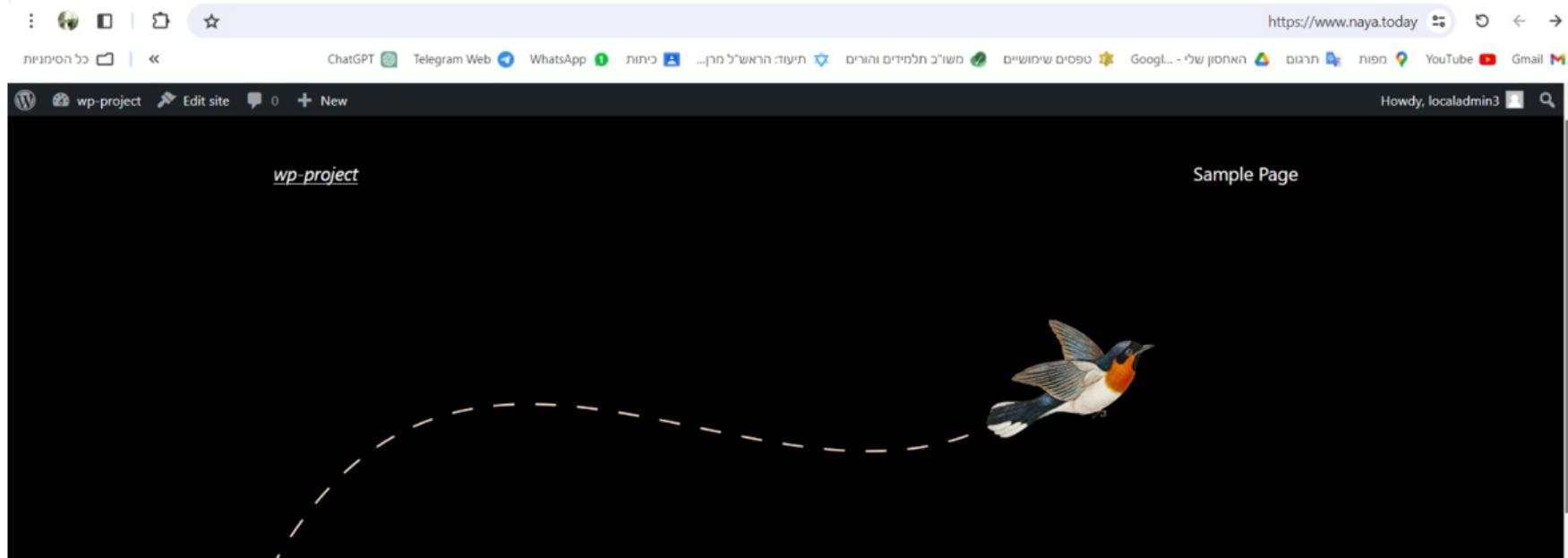
Alias
No

TTL (seconds)
300

Routing policy
Simple



CHECK CONNECTIVITY TO [WWW.NAYA.TODAY \(HTTPS!\)](https://www.naya.today) WORDPRESS WEB-SITE:



Hello world!

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

